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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823,650

04/14/2004

Makoto Taniguchi

119443

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25944

7590

07/21/2006

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

TIBBITS, PIA FLORENCE

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,650

Applicant(s)

TANIGUCHI ET AL.

Examiner

Pia F. Tibbits

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 4,6,7 and 18-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 8-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/14, 9/14/2004, 8/10/2005, 11/2/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

This Office action is in answer to the election filed 4/27/2006.

1. Applicant's election of Species V, claims 1-3, 5, 8-17, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse. **MPEP 818.03** (a) states that "As shown by the first sentence of 37 CFR 1.143, the traverse to a requirement must be complete as required by 37 CFR 1.111(b) which reads in part: "In order to be entitled to reconsideration or further examination, the applicant or patent owner must reply to the Office action. The reply by the applicant or patent owner must be reduced to a writing which distinctly and specifically points out the supposed errors in the examiner's action and must reply to every ground of objection and rejection in the prior Office action. The applicant's or patent owner's reply must appear throughout to be a bona fide attempt to advance the application or the reexamination proceeding to final action."

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-3, 5, 8-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-38 of **copending Application No. 11353220**.

Although the conflicting claims are not identical, they are not patentably distinct from each other because

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they both recite an internal condition detection system for a charge accumulating device comprising: a charge accumulating device for supplying power to an electric system; a current detecting means for detecting a charging and discharging current of the charge accumulating device; and a voltage detecting means for detecting a terminal voltage of the charge accumulating device; and a condition detecting means for detecting an internal condition of the charge accumulating device by learning an internal condition quantity of the charge accumulating device through a neural network which is fed with current values and terminal voltage values output from the current detecting means and the voltage detecting means, respectively, wherein the current values and the terminal voltage values are supplied so that historical information thereof are included.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5, 8-17 are rejected under 35 U.S.C. 102(b) as being anticipated by **Singh et al.** [6011379].

As to claim 1, Singh discloses in figures 1-15 an internal condition detection system for a charge accumulating device comprising: a charge accumulating device 12 for supplying power to an electric system 54 [see fig.11A]; a current detecting means 50 [see fig.11B] for detecting a charging and discharging current of the charge accumulating device; and a voltage detecting means E_o [see fig.4A] for detecting a terminal voltage of the charge accumulating device; and a condition detecting means for detecting an internal condition of the charge accumulating device by learning an internal condition quantity SOC of the charge accumulating device through a neural network 16 [see fig.1] which is fed with

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current values and terminal voltage values output from the current detecting means and the voltage detecting means, respectively, wherein the current values and the terminal voltage values are supplied so that historical information thereof are included [see column 2, lines 63-67; column 3, lines 1-9, 48-49; column 4, lines 14-29; column 6, lines 13-14; column 8, lines 58-67; column 9, lines 1-15].

As to claims 2, 3, 5, 8-17, see remarks and reference above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus: **Anbuky et al.** [6924622] discloses an estimation model for predicting the absolute or relative capacity of a battery includes input for a variable battery parameter and one or more battery operating conditions and/or battery condition, reference information, compensation means determining a correction factor for the variable battery parameter, and calculation means relating corrected variable battery parameter to absolute or relative battery capacity. The method may include use of training or learning means adapted to determine reference information relating a variable battery parameter to one or more battery operating conditions and/or battery condition; or to determine rules relating variable battery parameter, or change in variable battery parameter, to one or more battery operating conditions and/or battery condition. Preferably, training or learning means may be any one of an Adaptive Neural Fuzzy Interface System or an Adaptive Network, or other Neuro-Fuzzy or Soft Computing system. **Bertness** [6909287, 6850037, 6633165, 6331762, 6329793] discloses a battery monitor can provide real time battery condition measurements and can selectively control the charging of the battery through an alternator of the vehicle based upon the measured battery condition. The functional relationship can be determined by characterizing multiple batteries or through the use of artificial intelligence techniques such as neural networks. **Vonderhaar et al.** [6566883] discloses an electronic battery tester for testing a storage battery includes test circuitry configured to provide an output based upon a selected test criteria, where microprocessor 30 uses advanced testing criteria or testing techniques such as fuzzy logic, neural

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networks or other artificial intelligence techniques to detect and make decisions regarding the health of a battery or a battery pack. **Duley** [5459671] discloses a battery monitoring system, a first level containing information relating to real-time battery variables, a second level containing information relating to analysis or trend behavior of the real-time battery variables, and a third level containing user information relating to user and/or maintenance parameters, the user information being derived from the first and/or second level information. **Alber et al.** [5744962] discloses periodically measuring the capacity of the cells, wherein the type of measurement and/or the period between measurements is dependent upon the state of health of the cell or cells and/or the result of a previous test.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is 571-272-2086. If unavailable, contact the Supervisory Patent Examiner Karl Easthom whose telephone number is 571-272-1989. The Technology Center Fax number is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

July 17, 2006

Pia Tibbits
Primary Patent Examiner

